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Cost-effectiveness of corporate sponsored employee wellness programs

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COST-EFFECTIVENESS OF CORPORATE SPONSORED EMPLOYEE WELLNESS PROGRAMS

by

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A survey to ascertain the cost-effectiveness of corporate sponsored employee wellness programs was sent to Fortune magazine's top 500 corporations for 1983. The need for this survey arose from the fact that organizations employing many people have faced staggering increases in sponsored health care expenditures in recent years, leaving many firms searching for alternatives to these costs. Employee wellness programs have been found to be a viable alternative, yet some corporations have been reluctant to employ such programs due to the lack of knowledge concerning return on monies invested in such programs.

The scope of this survey was: the type of employee wellness program utilized (simple recreation, basic exercise, rigorous exercise or complete health), the number of employees involved, the year it was implemented, and health care expenditures for the one fiscal year prior to program implementation and the last experienced fiscal year. Health care expenditures included, but were not limited to the following items: X-rays, hospitalization, diagnostic and lab tests, doctor bills, prescriptions, and short term and long term disability payments.

One-hundred-thirteen surveys were returned, 11 of which contained all of the data necessary for a cost comparison analysis to be calculated. The analysis procedure occurred as follows: health care expenditures for the fiscal year prior to program implementation were converted to monies equivalent to the last experienced fiscal year. Analysis showed that seven companies experienced increases in health care expenditures below what would be expected due to inflationary rises in health care spending. These findings suggest a possible relationship between operating an employee wellness program and keeping health care expenditure increases below these due to inflation.

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CHAPTER 1

INTRODUCTION

Large organizations are becoming more and more aware of the rising costs of health care. In 1981, health care costs were approximately 10 percent of the total corporate payroll (Thomas, 1983) and estimated at $1 billion per year by Kaufman (1983). Over 97 million workdays are lost due to employee illness each year (Taylor, 1981) and during the past five years, employee health care benefit costs have risen 100 percent (Health Policy Council, 1983).

Much of the illness today can be traced to heart disease, stress, and other ailments that are related to a lack of exercise (Taylor, 1981). Therefore, in order to combat rising health care costs, some organizations have opted to operate a comprehensive wellness program in order to keep employees healthy and off sponsored health care. According to the National Industrial Recreation Association, nearly 50,000 firms are reported to have some type of wellness program (Pyle, 1979).

Performance measures for fitness programs exist for short term, intermediate, and long term effects on the health of the employees and benefit resources of the organization. The fact that short term effects are of value to the individual and long term effects of value to both the organization and the individual provides justification and encouragement for fitness programs (Pyle, 1979). Still, the bottom line for corporations is a return on their investment. Some large organizations which sponsor wellness programs already have saved money, as shown by the U.S. Postal Service which has reported an annual savings of $2.2

million (White, 1981). Sentry Insurance also reported that their employees contribute more to the company and display far less absenteeism because of their program (Donahue, 1981).

This study explored the relationship between health care spending and the use of corporate sponsored wellness programs. The cost-effectiveness information should appeal to corporations with existing programs and to those that are unsure if they could afford to start a program. Initial return on the investment may be small, but as more people within the organization become involved, the investment will be recouped and real savings will occur.

Statement of the Problem

The purpose of this study was to ascertain if the monies spent by corporations for health care benefits decreased after the implementation of fitness programs.

The Research Question

The implementation of employee wellness programs will result in a reduction in the monies that are spent by corporations for health care benefits.

The Delimitations

1. Only corporations within Fortune magazine's top 500 corporations (1983) were surveyed.
2. The study did not consider the initial cost of developing a program, money spent on improvements of the program, or salaries of program personnel in order to keep the questionnaire as uncomplicated as possible.

3. The study did not consider the probable increase in longevity leading to increased retirement benefit payments.

4. A follow-up mailing was not conducted because it was not financially feasible.

The Limitations

1. Health care spending can arise from aspects other than those which can be lowered by wellness programs (e.g. skin cancer, pregnancy, automobile accidents).

2. For some corporations, health care benefits differed from the definition given in the survey.

3. Some corporations were reluctant to release the needed information because they considered it classified.

4. Some corporations have policies which do not permit them to participate in surveys unless they are sponsored by the United States Government.

5. Some wellness programs have not been in operation long enough for effects on savings to show.

6. Information on health care spending before program initiation may not have been kept on file by some corporations.

7. The small return rate hampered the analysis of the data.

The Definition of Terms

Health Care Benefits Premiums paid for medical and disability insurance, including, but not limited to: X-rays, hospitalization, diagnostic and lab tests, doctor bills, prescriptions, and short and long term disability payments. Dental and optical premiums were not included unless combined with other premiums.

Definition of Employee Wellness Programs

Simple Recreation Programs Activities are conducted after work hours and participation is voluntary with no remuneration. The company usually encourages participation and may provide a limited exercise facility (e.g. weight or exercise room or both), or the facilities may be contracted or arranged with local groups (YMCA/YWCA) (Hollmann, 1984).

Basic Exercise Programs These programs are more rigorous and systematic than simple recreation programs. Participation is usually voluntary, but in occupations of high physical demands, it may be mandatory. Activities are scheduled before, during, or after work hours. The company may provide basic exercise facilities and "extras" such as running tracks, elaborate weight rooms, basketball, racquetball and handball courts, lockers, and showers, or the company may sponsor memberships at local health clubs, spas, YMCA's/YWCA's. Fitness goals are established and participants keep records monitoring gains in cardiovascular fitness, flexibility, and muscular strength (Hollmann, 1984).

Rigorous Fitness Programs These programs are under the direction of physician(s), exercise physiologist(s) or both. Participants begin with a thorough medical/physical examination including complete medical history, lab tests, and graded exercise testing. The staff evaluate these tests and write individualized exercise prescriptions with an emphasis on the cardiovascular system (Hollmann, 1984).

Complete Health Programs These programs are "total wellness" programs. They include all of the options of the rigorous fitness

program plus a wide range of other activities. Among these are stress management, proper nutrition and dietary counseling, smoking and alcohol abatement, coronary risk and obesity seminars, CPR training, and health promotion programs.

Assumptions

1. The list of companies surveyed was a representative sample of all major corporations in the United States.
2. The questionnaire was the best way to gather the necessary data.
3. The corporations' representatives answered the questionnaire honestly.
4. An increase in the number of corporations beginning a program will create an increased need in wellness program cost-effectiveness information.

The Importance of the Study

In recent years the work place has gained prominence over more traditional community based settings for health promotion activities. The most important reason for this change has been the inflationary costs of health care benefits and the need to manage these costs more prudently. However, there are other reasons why the work place is an ideal setting. With most people spending one-third of their time on the job, the work setting provides an already existing organizational structure, a convenient setting and a potentially supportive environment for health promotion activities.

These reasons have prompted many organizations to initiate employee wellness programs, but others may be reluctant to do so because they do not want to invest money for a financially unproven program. Studies like this need to be done to add credibility to the argument that wellness programs will show a return on the money invested.

CHAPTER 2

THE REVIEW OF THE RELATED LITERATURE

In 1980, Haskell and Blair reported that no study had adequately evaluated the economic benefits of employee exercise programs. However, several studies have reported estimates of the actual costs of health care benefits for employees. In 1981, health care costs were approximately 10 percent of the total corporate payroll (Thomas, 1983), estimated at $1 billion per year by Kaufman (1983). During the period 1978-1983, employee health care costs increased 100 percent (Health Policy Council, 1983). Each year, heart disease accounts for $25 billion in premature deaths, $11 billion in disability, and $700 million in replacement costs (Health Policy Council, 1983). Corporations spend $10 billion each year in lost work time and service due to heart attacks and other cardiovascular problems (Business Week, 1979). Xerox Corporation, for instance, estimated that it costs $1.5 million to replace a top executive due to premature mortality. A Toronto insurance company spends an estimated $8,500 to replace a manager and $4,500 to replace a clerical employee (Health Policy Council, 1983).

Employee wellness programs have required large amounts of money for some corporations to implement and maintain. Adolph Coors Company spent $600,000 to build a fitness facility on corporate grounds and Tenneco spent $1.1 million on exercise facilities and an additional $2.2 million for a dining complex which serves a variety of healthy meals (Lange, 1982). In order to keep employees participating, some corporations offered incentives to decrease attrition. For instance, Bonnie Bell

provided financial incentives for employees who exercise regularly at company facilities and Speed Ball Corporation offered a $7 per week bonus to employees for not smoking on the job, which resulted in a decrease of 20 smokers at the company (Aging, 1984). However, programs, facilities, and philosophies on running programs varied widely. Some corporations provided a small exercise room or a running track while others provided elaborate wellness complexes (U.S. News & World Report, 1980). Other corporations have facilities provided for them by YMCA's, private health clubs, or firms such as Cardio-Fitness, Incorporated, which serves 40 New York City corporations at various city locations (U.S. News & World Report, 1980). Employee participation was generally voluntary, conducted on the employee's time, and free of charge. However, some corporations provided work-out breaks on company time and charged a small fee for participation. Phillips Petroleum charged employees $12 per year which included family usage of the facility (U.S. News & World Report, 1980).

In all sectors, insurance carriers and employers have been seeking ways to hold health care costs in check. Insurance plan sponsors have begun challenging claims which records indicated were too high (Compensation Review, 1981). Employees who sought medical care were encouraged to find less costly forms of care such as outpatient or hospice care when possible (Perham, 1980), and surgical second opinions were encouraged on either a voluntary or mandatory basis (Compensation Review, 1981). Some health insurance companies have joined in the savings aspect by offering lower health insurance premiums to companies with wellness programs (Kaufman, 1983; Thomas, 1983). Also, life in-

surance companies are cutting their premiums for the insured who stays fit. Some are lowering premiums as much as 50 percent as long as the applicants follow a strict regimen of exercise and have no personal or family illness (NESRA, 1983).

The economic rationale that corporations look for from wellness programs are: less usage of sick time, less usage of health insurance; postponement or avoidance of permanent and total disability payments (Cook, et al. 1979); and lowering worker's compensation payments, cardiovascular disease mortality and rehabilitation costs, lost days to backaches, and absenteeism from all sources (Brennan, 1982; Kaufman, 1983; Thomas, 1983).

Forouzesh and Ratzker (1984) reported that of 239 Fortune 500 corporations responding to a survey, 70 sponsored over 400 kinds of wellness programs. Thirteen respondents were just initiating programs at the time of this survey. The most common programs were as follows: 1) weight reduction, 2) smoking cessation, and 3) high blood pressure safety. Most companies required some kind of medical examination before the employee was allowed to participate. More than half (57 percent) required physical exams, 41 percent required blood tests, and 40 percent checked serum cholesterol. Other assessments, such as body composition and cardiovascular fitness, were also conducted. The age of the programs ranged from two months to 25 years, with the average being five to six years.

In many instances, company sponsored wellness programs are utilized primarily by managerial personnel. Fitness Systems, Incorporated (FSI) conducted a study of the employment level of program participants (Employee Benefit Plan Review, 1980). The FSI study found that 50 per

cent of the participants were managerial personnel with the balance divided between medical and lower level personnel. Lange (1982) also reported that better educated men and women in the physically least taxing occupations tend to devote more time and money to health. Clutterbuck (1980) suggested that this trend could be linked to research proving that ill health among executives results in lost time and money to corporations. As a result, some firms have implemented programs to keep managers in good shape. Studies which have dealt with employee replacement costs and economic rationale have pointed out that corporations would benefit from allowing non-managerial personnel to participate in wellness programs as well (Health Policy Council, 1983; Kaufman, 1983; Thomas, 1983).

Both Tenneco, which has 1,500 participating employees with an additional 1,900 waiting to join, and Coors Company allow participation from all employment levels (Lange, 1982), while programs run at Xerox were for managerial personnel only (U.S. News & World Report, 1980). Pyle (1980) reported that many companies have opened their programs to increasing numbers of non-managerial employees to help prevent increased health care expenditures on all employment levels. Inco Incorporated of Washington, D.C. reported that 100 of its 120 employees were active in fitness programs at a nearby health club. Inco paid for most of the membership fees, which seemed to have reduced attrition rates (Lange, 1982).

Many wellness programs have shown favorable results. Research from the Soviet Union has shown that worksite wellness programs have decreased doctor visitations, lowered morbidity, shortened illness duration, and have resulted in fewer relapses (Kaufman, 1983). Canadian

Life Assurance Company reported a 42 percent decrease in medical costs for its 12,000 employees participating in a similar program. A study by the Institute for Aerobic Research revealed a 25 percent increase in sales for real estate sales people who increased their fitness compared to no increase for those not doing so (Collingwood, 1981). Five-hundred major employers found that they had reduced health care costs per person from $1,115 to $806 by offering four or more health promotion programs for their employees. Chrysler Corporation and Campbell Soup Company discovered that medical related costs were one-third what they had been before starting in-house hypertension control programs. Two years after Kimberly-Clark instituted a weight control program for employees, it experienced a decrease of 60 percent in disability premiums per participant. Exercise participants at Northern Gas Company of Nebraska used one-fifth as many leave days as the non-participants during six months in an exercise program. A Toronto, Canada Assurance company saved an estimated $175,000 in health care after initiating rigorous 30 minute exercise several times each week. Absentee rates decreased 60 percent for men and 38 percent for women (Health Policy Council, 1983). Companies, programs and savings are listed in Table 2-1.

Portland Adventist Medical Center in Portland, Oregon instituted a wellness incentive program for its employees when Blue Cross coverage promised each participant completing the wellness program $300 at the end of the year. Activity categories of the wellness program included: exercise/fitness, nutrition/weight control, dependency/substance abuse, safety, personal growth, and general health enrichment activities.

TABLE 2-1

COMPANIES WITH WELLNESS PROGRAMS EXPERIENCING SAVINGS ON HEALTH RELATED COSTS

Company	Program Type	Savings
Chrysler Corp.	Hypertension	1/3 less for Health Care Costs
Campbell Soup Co.	Hypertension	1/3 less for Health Care Costs
Kimberly-Clark	Weight Control	60% Decrease in Disability Payments to Participants
Northern Gas Co.	Exercise	20% of Sick Days Used Compared to Control
Toronto Assurance	Exercise	$175,000 and Decreased Usage of Sick Days

Source: Health Forecast. Health Policy Coucil Publication, Des Plains, IL. 1983, 3 (2), 1-3.

Eight-hundred-sixty-five employees participated in the study, 253 control and 612 experimental. Baseline health data were gathered on the experimental group through exercise and strength testing, health risk appraisal, and nutritional habit questionnaires. The experimental group showed an average savings per employee of $366 in medical claims over the control, incurred 279 fewer hospital days per 1000 employees, and averaged 25 less sick hours per employee during the year. The net savings totaled over $320,000 after consideration of the costs of testing and refunds to those completing the program (Hall, 1983). Table 2-2 provides a breakdown of the findings.

Cost benefit studies on various types of wellness employee assistance programs have also shown favorable results (Chapman, 1984). The

TABLE 2-2.

FINDINGS FOR HALL'S STUDY

Medical Claims	Control	Wellness
Number of Employees	253	612
Total Health Insurance Claims	$333,673	$583,298
Cost per Employee	$ 1,319	$ 953
Savings per Employee	—	$ 366
Total Savings (compared to control)	—	$223,992
Hospital Stay Results		
Inpatient Days/1000 Members	718	439
Fewer Hospital Days/1000 Members	—	279
Sick Hours/ Employee/Year		
1981 (Year Before Study)	58	58
1982 (Year of Program)	54	29
# of Hours Saved/Employee	4	29
Cost Saving/Employee (compared to control)	—	$ 250
Savings for Wellness Group	—	$153,000
Total Savings (Medical Claims and Decreased Sick Time)	—	$376,992
Less Expenses		
Refunds	$41,509	
Testing	$10,900	52,409
Net Savings		$324,583

Source: Hall, Don, M.D. "Outcome of PAMC's Wellness Incentive Program for Employees". Unpublished Manuscript, Portland, OR., 1983.

Pontiac Division of General Motors showed a return of $6 for every $1 spent on a general health promotion program. An entire community in Finland gained $5.80 for each $1 spent on the same type of program. Employee wellness programs from DuPont Chemical to a 12 company survey by John Hopkins University returned from a high of $5 to a low of $1.40 for each $1 spent on their program.

Not all studies on wellness programs have reported savings. Imrie-Carey (1984) conducted a pilot wellness program for 470 Oregon State employees from January through June 1983 to examine the effectiveness of the program on lost work time and employee attitudes. The wellness program consisted of pre- and post- medical screening with a computerized health risk assessment, one wellness class and two fitness classes per week. At the end of the program, the study group had less lost work time compared to the controls, but the difference was minimal. Statistical analysis of the data revealed no significant difference between the control and study groups following the program. On the average, attitudinal scores for the control group were slightly higher. Another study was conducted by Edwards, et al (1980) on real estate investment brokers to determine if increased fitness was related to improved job performance. The results indicated that while the study subjects improved in physical fitness and slight gains in job performance were made, the difference was not statistically significant.

There is no question that the cost of health care today is very high. However, a question does remain as to the effectiveness of wellness programs on holding the costs down.

CHAPTER 3

THE METHODS AND PROCEDURES

The Data

The scope of the survey of the cost-effectiveness of corporate wellness programs included four types of programs (simple recreation, basic exercise, rigorous exercise, and complete health) which could lower several health care costs. These costs were: X-rays, hospitalization, diagnostic and lab tests, doctor bills, prescriptions, and short and long term disability payments. The survey analyzed the cost of health care benefits on a per employee basis during the organization's fiscal year prior to implementing a wellness program and for the most recent fiscal year experienced by the company. The organization was also asked for the number of employees participating in each type of program in each of the employee categories: executive and managerial, professional-non-managerial, and operative.

Data Collection

The survey consisted of sending a cover letter and a questionnaire (Appendix B) to 499 of the Fortune 500 corporations, based on gross sales for 1983 (the address for one of the corporations could not be located). The correspondence was addressed to the corporation's personnel director since this individual would be in the best position to either answer the questionnaire or to send it to an individual within the organization capable of answering. Any data provided that aided in answering the survey were accepted. No follow up questionnaires were sent out. Second mailings historically yield 50 percent of the non-

respondents (Miller, 1984), which could have increased the return rate, but at the time of this survey, a second mailing was not financially feasible.

The cover letter (Appendix A) introduced the organization's official to the surveyor and to the scope of the survey. The letter guaranteed confidentiality to both the individual and the organization.

The Research Methodology

A mail questionnaire was chosen for two reasons: (1) to eliminate the biases of interviewing, and (2) the mail was the most economical way to reach many organizations in a short period of time. Fortune magazine's top 500 corporations were surveyed because as larger organizations, they were more likely to have wellness programs, and the address of each company was readily available. Also, with corporations in 38 states and the District of Columbia, they represented a geographical cross-section of the United States. Health care expenditure components were chosen due to their ability to be affected by wellness programs and because many companies provided these coverages for their employees. The United States government's consumer price indicies for the governmental fiscal years of 1967-68 through 1983-84 provided the medical care inflationary rates (Appendix C). These rates were based on the following items: medical care commodities (prescription and non-prescription drugs and medical supplies), and medical care services (physician, dental, and other professional services, hospital and other medical services). Information concerning general price indicies was taken from the text: Accounting: A Survey by Henry E. Riggs.

The Treatment of the Data

The first review of the questionnaires consisted of separating the responses into six categories. These categories were: (1) companies with programs with all of the necessary information for comparison, (2) companies with programs having only health care expenditures for the most recent fiscal year; (3) companies which had implemented their wellness programs within the calendar year, (4) companies with programs not reporting any health care expenditure information, (5) companies without employee wellness programs, and (6) companies which for various reasons could not participate in surveys. Only questionnaires from category (1) were subjected to further study.

In the second, more in-depth review, the dollar values of the health care expenditures for the fiscal year prior to implementation of the program were converted to governmental fiscal 1983-84 dollars. These monies were then compared to the health care expenditures for 1983-84 to ascertain if operating a wellness program had any effect upon expenditures. The conversion to current dollars occurred through the following process.

EXAMPLE: The fiscal year prior to program implementation (in this example, 198A) was designated as the base year and therefore given a general price index (GPI) of 100. This means that $1 has the purchasing power of $1. The GPI for two years later (in this example, 198C) was consistent with the rise in health care cost inflation between the years 198A and 198C.

Year	198A	198B	198C
Rate of Inflation	----	6.5%	8.0%
GPI	100	106.5	115

Formula:

GPI(198B)= GPI(198A) + [GPI(198A) X Rate of Inflation]

To find the GPI for the next year (198B), the GPI for the preceeding year (198A) was added to the product of the GPI for the preceeding year (198A) and the rate of inflation for the next year (198B).

GPI(198B) = 100 + [100 x 6.5%]

GPI(198B) = 100 + 6.5

GPI(198B) = 106.5

GPI(198C) = 106.5 + [106.5 x 8.0%]

GPI(198C) = 106.5 + 8.5

GPI(198C) = 115

Therefore, in year 198C, $1.15 would have the same purchasing power of $1 in year 198A.

To complete the example, XYZ Company began an employee fitness program in the year 198B. XYZ Company reported health care costs (per employee) of $1,000 for year 198A (the fiscal year prior to program implementation) and $1,025 (per employee) in year 198C (the last fiscal year). When 198A dollars were converted to 198C dollars, the predicted cost became $1,150. The following formula was used to reach the predicted cost:

Predicted cost (for year) = (Base year) Actual cost X

GPI* (for year)

*(To simplify the mathematics, the GPI was divided by 100)

Predicted Cost for 198C = $1,000 x 1.15

Predicted Cost for 198C = $1,150

Therefore, the predicted cost for 198C was $125 more per employee than the actual cost of $1,025 per employee.

CHAPTER 4

RESULTS AND DISCUSSION

Four-hundred-ninety-nine surveys were sent to Fortune magazine's top 500 corporations based upon gross sales for 1983. One-hundred-thirteen surveys were returned producing a total return rate of 22.6 percent. Three organizations (2.7 percent of all respondents) reported that they could not participate for various reasons: one due to a back-log of surveys, one due to a company policy against participation in non-U.S. governmental surveys, and one due to corporate decentraliza-tion. Response rates are presented in Table 4-1.

Forouzesh & Ratzker (1984) completed a similar study and compiled a return rate of 47.8 percent. That study used a follow-up questionnaire to improve return rate, this study did not.

Approximately half of reporting companies (57 or 50.4 percent of all respondents) sponsored no type of wellness program. Since the vari-able being tested in this study was the use of a wellness program and comparisons were made on an intra-corporation basis, respondents without a wellness program were not asked to supply information concerning health care expenditures. Thus, the remainder of the study was confined to the respondents with a wellness program.

Fifty-three respondents (46.9 percent of the total number of respondents) acknowledged operating at least one of the four types of employee wellness programs. Included in this group were 11 corporations (20.7 percent of "yes" respondents, 9.7 percent of all respondents) which provided all of the data necessary for cost comparisons to be

made. The Forouzesh & Ratzker study, in comparison to these findings, had a smaller percentage of corporations with programs, but the actual number (70) was greater than the number of corporations who sponsored programs in this study.

TABLE 4-1

CATEGORIES OF THE RESPONSES

	NUMBER
(1) Companies with programs with all of the necessary information for comparison.	11
(2) Companies with programs having only health care expenditures for the last fiscal year experienced.	7
(3) Companies which had implemented their wellness programs within the last year.	8
(4) Companies with programs not reporting any health care expenditure information.	27
(5) Companies without employee wellness programs.	57
(6) Companies unable to participate in surveys.	3
TOTAL	113

Given a population size of 53 wellness programs, 46 respondents must sponsor the same type of program in order for the numbers to be meaningful (Isaac and Michael, 1983). Unfortunately, this level of assurance was not achieved in this study. However, simple recreation programs proved to be most popular. Nineteen organizations sponsored

simple recreation programs with an additional 10 simple recreation programs sponsored by corporations providing two or more programs. Sixteen respondents reported operating more than one program. For example, eight companies operated simple recreation together with complete health programs. Rigorous exercise programs, on the other hand, proved to be the least popular, operated singly by only one corporation, and used in conjunction with other programs only four times. Two respondents failed to report the type of program operated. Program sponsorship data are provided by Tables 4-2 and 4-3.

TABLE 4-2

BREAKDOWN OF PROGRAM TYPES AND

NUMBER OF CORPORATIONS SPONSORING EACH

	Number	Percentage
Simple Recreation Program (SRP)	19	35.8%
Basic Exercise Program (BEP)	9	17.0%
Rigorous Exercise Program (REP)	1	1.9%
Complete Health Program (CHP)	6	11.3%
Two or More Programs	16	30.2%
Program Type(s) Unknown	2	3.8%

The length of program operation varied widely. Two corporations reported "always operating simple recreation programs" and one had operated a simple recreation program since 1956. Forouzesh & Ratzker (1984) had similar findings as the age of the programs ranged from two months to 25 years with an average age of five to six years. Between 1978 and 1983, health care costs doubled, (Health Policy Council, 1983) and it was during this period that 20 organizations initiated programs.

TABLE 4-3

BREAKDOWN OF PROGRAM TYPES FOR

COMPANIES SPONSORING TWO OR MORE PROGRAM TYPES

	Number
Basic, Complete	1
Basic, Rigorous, Complete	1
Basic, Rigorous	1
Simple, Rigorous, Complete	1
Simple, Basic, Rigorous	2
Simple, Complete	2
Simple, Basic	3
All Four Programs	5
TOTAL	16

As a matter of fact, 58 percent of the programs studied in this survey were initiated within the cost doubling period while only 16 percent were begun in the four years prior to that. In addition to that, 17 (52 percent) of the programs initiated during the cost doubling period opened during the six to 12 month period prior to the survey. This number was slightly greater than the number of programs just initiated in the Forouzesh & Ratzker study.

The majority of the programs in existence for at least 10 years were simple recreation programs. In contrast, while simple recreation programs are still being initiated (11 in the last four years), many corporations have started more comprehensive types of programs. Between 1979 and 1983, companies initiated four complete programs, seven basic programs and nine combinations of programs (two or more). This suggests

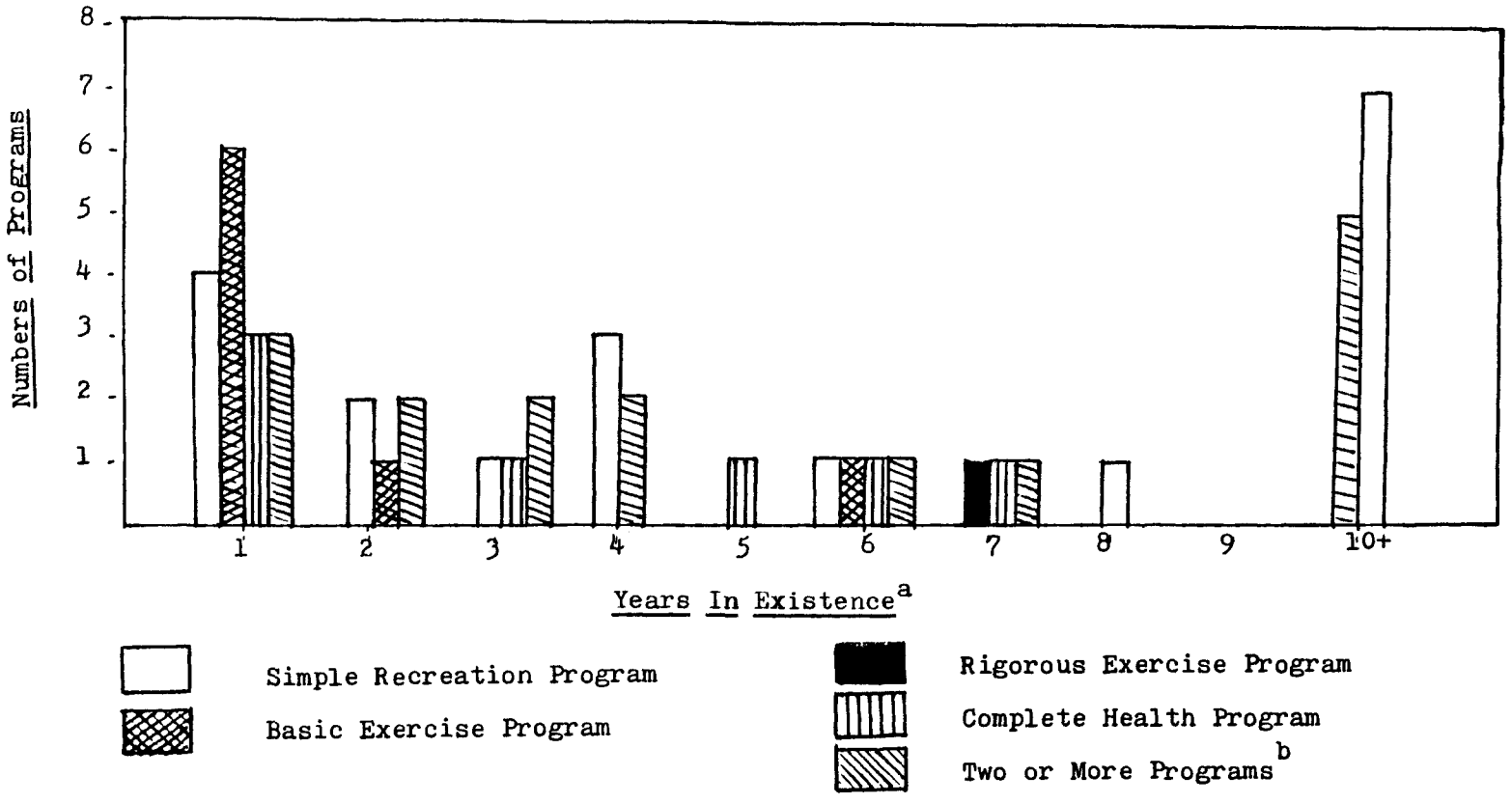
that in recent years, corporations have become more interested in wellness programs as a means of influencing the health of employees rather than simply providing recreational diversions. The length of time the programs have been in existence are presented by Table 4-4.

Location information as well as information concerning employee involvement for each of the 11 corporations providing all of the information needed for comparison are presented in Table 4-5. The respondents were located in the west coast (1), Rocky Mountains (2), mid-west (3), mid-east (2), the north-east (2) and east coast (1) regions. Two of the programs in the group were in the first six months of existence and the oldest program had existed for eight years. Each of the program types were represented by the corporations, with four organizations sponsoring simple recreation programs and three sponsoring all four program types. On the other hand, only one corporation reported operating a complete health program alone and one corporation did not provide a breakdown of program types. The corporation location seemed to have no bearing on the type of program sponsored.

The number of employees involved in the program ranged from 33 in a pilot program to 7,650 in a well established program. The percentage of employees who used the program ranged from 0.6 percent to 90 percent. Most of the corporations had approximately one percent of the employees involved in wellness programs. The percentage of participants by occupation broke down differently than the findings from the earlier study conducted by Fitness Systems, Incorporated (Employee Benefit Plan Review, 1980). Instead of the 50 percent managerial participation and the balance distributed between medical and lower level personnel, this

TABLE 4-4.

LONGEVITY OF PROGRAM TYPE



[a] Programs in existence for one-half year were counted as existing one full year.

[b] Age of programs in this category were based upon the establishment of the original programs.

TABLE 4-5

DETAILS FOR PROGRAMS

PROVIDING COMPARISON DATA

	LOCATION	YEARS IN EXISTENCE	PROGRAM TYPE	TOTAL EMPLOYEES	EMPLOYEES INVOLVED	PERCENTAGE OF PARTICIPANTS EXEC.	PROF.	OPER.
COMPANY A	WEST-COAST	2	N/A	48,000	N/A	---	---	---
COMPANY B	ROCKY-MTN.	8	CHP	27,000	N/A	---	---	---
COMPANY C	MID-WEST	1	BEP	19,720	250	N/A	N/A	N/A
COMPANY D	MID-EAST	1/2	BEP	9,390	90	100.0	---	---
COMPANY E	MID-EAST	2	ALL	74,858	1,050	23.8	47.6	28.6
COMPANY F	NORTH-EAST	2	SRP	78,000	50	50.0	50.0	---
COMPANY G	MID-WEST	4	ALL	700	135	N/A	N/A	N/A
COMPANY H	ROCKY-MTN.	2	ALL	8,500	7,650	N/A	N/A	N/A
COMPANY I	NORTH-EAST	3	SRP	N/A	75	33.3	---	66.7
COMPANY J	MID-WEST	2	SRP	37,000	50/FAC*	---	100.0	---
COMPANY K	EAST-COAST	1/2	SRP	4,061	33	15.2	75.8	9.0

* THE NUMBER OF FACILITIES WAS NOT REPORTED BY THE RESPONDENT.

study found that executive and managerial personnel made up 30.4 percent of the participants, professional non-managerial composed 32.5 percent, and operatives filled in the remaining 37.1 percent. Other literature (Lange, 1982) supported the findings of this study, as programs at Adolph Coors and Tenneco are open to all employees. The number of the employees seemed to have no bearing on whether a program existed as corporations with as few as 700 and as many as 75,000 had a program. However, in this study, the trend was toward larger employers (greater than 5,000 employees) operating programs.

The amount of money that each of the 11 corporations providing expenditure data spent on health care per employee varied widely. However, companies located in similar geographic regions spent similar amounts on health care for employees. The two companies located in the Rocky Mountain region spent less than $1,000 per employee; while the two companies in the mid-eastern states spent approximately $2,000 per employee. The companies of the mid-western states differed slightly, yet all three spent within a $500 range ($2,038 to $2,530). The least amount spent prior to initiating a program was $129.03 (in 1983-84 equivalent dollars) by a company based in the Rocky Mountain region. The largest sum spent before beginning a program was $3,099.25 (1983-84 equivalent dollars) by a company based in the mid-eastern region. The average cost for these 11 companies was $1,750.60 (1983-84 equivalent dollars). Without including the two lowest expenditure amounts, the average became $2,081.71, which seemed to be a more representative cost for the reports as the median cost was $2,013.69. Two corporations provided gross expenditures which illustrated the fact that health care

expenditures easily exceeded the $1 million mark for large employers. One of these corporations paid $32 million (1983-84 dollars) while the other corporation spent over $21 million. The latter corporation also provided a breakdown of spending for home and field offices. The home office accounted for 27 percent of the total health care costs, yet only six percent of all employees.

The difference between actual cost in 1983-84 and 1983-84 predicted cost ranged from an increase of $296.11 per employee to a decrease of $764.05 per employee. The average change for all was a decrease of $122.84, and for the seven corporations which showed decreases the average was $202.67. Geographic location of the companies did not matter when decreases in health care spending were considered, as these corporations were dispersed throughout the country. Comparison data for the 11 corporations are presented in Table 4-6.

The major finding of the study, albeit too small for statistical purposes, was that seven of the 11 major corporations which sponsored some type of employee wellness program saved money on health care when actual costs were compared to predicted costs based on inflationary rates. Many factors were involved in the doubling of health care costs between 1978 and 1983 (e.g. - increasing malpractice insurance premiums, hospital costs), as many factors would have been involved with these seven corporations saving money on health care costs (e.g. - outpatient services, generic drugs). One factor involved for these corporations would have been an employee wellness program. However, due to the small return rate of this study, the preceeding statement as well as the other preceeding discussions must be considered speculative rather than definitive.

TABLE4-6

COST COMPARISON DATA

FOR THE 11 COMPLETED SURVEYS

Company	Program Established (Year)	Cost/Employee For Year Prior To Program	Cost/Employee For Year Prior To Program: 1983/84 Equivalent $s	Actual Cost/ Employee For 1983/84	Difference	Inflation Rate For Period	Actual Difference
[1]A	1981 (H.O.)	$ 1,651.00	$ 1,989.97	$ 2,061.00	+$ 71.03	36.2%	+ 3.5%
	1981 (F.O.)	$ 325.00	$ 392.19	$ 443.20	+$ 51.01	36.2%	+ 13.0%
B	1976	$ 407.00	$ 888.89	$ 1,185.00	+$ 296.11	83.5%	+ 33.3%
C	1983	$ 2,011.00	$ 2,137.69	$ 2,271.00	+$ 133.31	6.3%	+ 6.2%
D	1984	$ 2,000.00	$ 2,116.00	$ 2,000.00	-$ 116.00	5.8%	- 5.5%
E	1982	$ 2,450.00	$ 3,099.25	$ 3,257.00	+$ 157.75	24.5%	+ 5.0%
F	1981	$ 1,400.00	$ 1,978.20	$ 1,625.00	-$ 353.20	36.2%	- 17.8%
G	1980	$ 1,300.00	$ 2,038.40	$ 1,700.00	-$ 338.40	47.1%	- 16.6%
H	1982	$ 102.00	$ 129.03	$ 121.00	-$ 8.03	24.5%	- 6.2%
I	1981	$ 1,850.00	$ 2,614.05	$ 1,850.00	-$ 764.05	36.2%	- 29.2%
J	1982	$ 2,000.00	$ 2,530.00	$ 2,000.00	-$ 530.00	24.5%	- 20.9%
K	1984	$ 1,260.00	$ 1,333.08	$ 1,260.00	-$ 73.08	5.8%	- 5.5%

[1] Expenditures for both home (H.O.) and field (F.O.) offices were provided

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

A survey study concerning the cost-effectiveness of employee wellness programs was sent to 499 of Fortune magazine's top 500 corporations (based on gross sales for 1983). The survey defined four types of wellness programs (simple recreation, basic exercise, rigorous exercise, and complete health) from which respondents could chose one or more which most closely described their program or programs. Respondents were asked to supply the number of executive/managerial, professional-non-managerial, and operatives participating in their program or programs, the fiscal year in which the program was implemented, health care expenditures per employee for the one fiscal year prior to program implementation, and health care expenditures for the last experienced fiscal year. These health care expenditures were: X-rays, hospitalization, diagnostic and lab tests, doctor bills, prescriptions, and short and long term disability payments. Respondents could add other considerations (e.g. dental or optical premiums or both) if necessary.

One-hundred-thirteen surveys were returned. Fifty-seven reported not sponsoring any type of wellness program for employees. Because the variable being tested in this study was the use of a wellness program on health care expenditures, and all comparisons were made on an intra-corporation basis, this group was not asked to supply further information. Three responded but did not participate for various reasons.

Fifty-three respondents sponsored one or more programs for employees. Eleven respondents supplied all of the information necessary to conduct a cost comparison analysis. The comparison process set the general price index of the year prior to program implementation at 100 and the general price index of the last fiscal year experienced at a number consistent with the rise of inflation of health care costs during the period. The expenditures for health care for the year prior to program implementation were converted to the last experienced fiscal year's monies so that the comparisons could be made. Upon comparison, seven of the 11 corporations which reported all of the data necessary for comparison experienced rises in health care expenditures lower than the rise in health care costs due to inflation for the respective periods of time in question.

Conclusions

Within the limits of this study, the cost-effectiveness of corporate wellness programs cannot be conclusively shown. The return rate of the study was insufficient for conclusions to be drawn with any level of assurance, therefore, any conclusions would have to be considered speculative.

This study found three trends worthy of discussion. The most important of these was that seven of the 11 corporations providing cost comparison data had health care expenditure increases below the rate of inflation for the period of time that an employee wellness program had been in effect. The use of an employee wellness program could be included on a list of factors which led to these seven corporations main-

taining health care expenditures below inflationary increases. The related literature contained numerous reports (Collingwood, 1981; Kaufman, 1983; Hall, 1983; Health Policy Council, 1983) of employee wellness programs as a factor in maintaining employee health care costs.

Second, corporations in this study appeared to be willing to allow employee participation from all employment categories (executive/managerial, professional-non-managerial, and operative). The literature (Lange, 1982; Health Policy Council, 1983; Kaufman, 1983; Thomas, 1983) stated that this is a sound practice for cutting health care costs as well as promoting multi-level corporate comraderie.

Finally, corporations which initiated programs between 1979 and 1983 were inclined to have more comprehensive types of programs while older programs were inclined to be less sophisticated. This suggests that corporations may be sponsoring more comprehensive programs in order to influence the health of their employees and therefore, reduce health care costs, while older programs were established with the idea of providing employees with recreational pursuits and team spirit. Literature on the subject (Collingwood, 1981; Hall, 1983; Health Policy Council, 1983; Cunningham, 1984) reported that employee health programs which promoted cardiovascular risk factor reduction helped to lower employee health care costs and were cost effective.

Recommendations

1. Further research. The size of a survey of this nature should be scaled down to managable proportions. A survey of regional corporations would be much more practical. A survey of this size becomes much too

difficult to manage, especially on a limited budget. A survey of a five to six state area with fewer potential respondents could produce a much greater response rate due to the fact that telephone or personal contacts could easily uncover the reason for non-returned surveys. Telephone or personal contact could even be used to help gather the information if the mailed survey were somehow lost or misplaced by the potential respondents.

A study of corporations known to have programs could improve the response rate because the respondents would have a vested interest in the outcome of such a survey. However, this hypothesis may not prove to be true as several corporations known to have programs within the population of this survey failed to respond. Also, obtaining a list of corporations with programs through professional organizations is expensive.

Another approach could use a case study of a corporation with a wellness program. A longitudinal study which compares health care expenditures to users of the programs to non-users could then be conducted. This type of study would be quite manageable for the researcher as all of the needed information would be readily available and questionnaires would not be necessary.

A follow-up study along this line could compare the effectiveness of cost containment for the different types of programs. A conclusion could then be drawn as to which type or types of programs would be more beneficial for an organization to implement. If simple recreation programs were actually as effective as complete health programs, then the recreational program should be used because of lower set-up and

maintenance costs. Still another study could compare the number of employees utilizing the program to the amount of money saved on health care expenditures. If as the number of participants increased, the amount of money saved increased, then existing programs would receive more support from key personnel and programs waiting to begin would receive the needed push to start operation.

2. For existing programs. Existing programs would benefit from the following advice.

1. Employees should be made aware of the program and the potential benefits it may offer to them. After employees are made aware of the program, they should be reminded of it frequently. (Sperling, 1981).
2. The activities of the program must be challenging and stimulating. Dull programs lead to high attrition rates (Allen, 1980).
3. The responsibility of reaching health related goals must be set upon the shoulders of the participants. The staff must not promote a "we will do it for you" attitude (Allen, 1980).

Sponsors of existing programs must realize that wellness programs cannot save money overnight. The sponsors must also realize that the responsibility of holding down health care costs is not theirs alone. A coalition of consumers, government, business, insurance underwriters, and the media profession must work together to slow the increase of health care costs.

3. For those wishing to establish a program. Those wishing to begin a program would be wise to heed the advice for existing programs in addition to other suggestions which include, but should not be limited to the following:

1. The fitness program should be based on established objectives and its director must work towards corporate objectives (Pyle, 1979). This establishes a professional setting for the program which will help gather backing from key individuals within the organization.
2. Goals should be based on measurable results of the more fit individual such as less absenteeism and improvement of degenerative disease risk factors (Allen, 1980). These goals are well established measurements of wellness programs and are beneficial to both the individual and the organization, so they would be well accepted as goals for all parties involved.
3. The program must receive the backing of key individuals within the organization such as the chief executive officer or president or both (Allen, 1980). Without the backing of key corporate individuals, a wellness program would never be opened.

Those who are proposing wellness programs for organizations must remember that the program is only one part of a complicated answer to checking the rise of health care costs. They must also realize that they may be fighting an uphill battle to gain the support of key individuals who can make or break a program. The promoters of a new

program must be persistent and be well armed with literature which will back claims of wellness programs aiding health care costs.

APPENDIX A

University of Montana
Missoula, Montana 59812

Dear Colleague:

I would appreciate your participation in my survey study of employee fitness programs within Fortune Magazine's top 500 corporations. As you may know, the field of corporate fitness is relatively young with little information concerning the cost effectiveness of these programs. Your participation could help to gain more information about this important dimension of fitness programs.

The purpose of this study is to determine whether company health care expenditures (on a per employee basis) are effected by (1) the type of fitness program, (2) the number of participating employees, and (3) the age of the fitness program. Other factors may be equally important, but they will not be dealt with at this time.

Confidentiality will be guaranteed. The code number on the questionnaire is there to save you the bother of repeat mailings. The code number will be known only by myself, and there will be no mention of the names of corporations in any subsequent publications.

Thank you for taking time from your busy schedule to complete this survey. Please consult others in your organization who may be of service to you in completing the questions. If you would like a copy of the results, complete the necessary information on the questionnaire. Please return the questionnaire as soon as possible in the return envelope provided. Again, thank you for your time and cooperation.

Thank you,

Kevin Bill

Kevin Bill
Association for Fitness in Business Member

APPENDIX B

SURVEY ON COST EFFECTIVENESS OF EMPLOYEE FITNESS PROGRAMS

Employee Fitness Program Definitions: Essentially there are four types of employee fitness programs. Please consider the following definitions when answering the questions.

Simple Recreation Programs. Conducted after work hours, voluntary participation by employees with no pay or benefit incentives. Company usually encourages employee participation and may provide a limited exercise facility (e.g. small room with weight lifting and/or room for exercising), or facilities may be contracted or arranged with local groups (YMCA/YWCA).

Basic Exercise Programs. More rigorous and systematic than simple recreation programs. Participation is usually voluntary, but in occupations of high physical demands, it may be mandatory. Fitness goals are established for participants, and scheduled before, during, or after work hours. The company may provide basic exercise facilities and "extras" such as running tracks, elaborate weight rooms, basketball, tennis, racquetball, and handball courts, lockers and showers. If the company cannot provide the facilities, it may sponsor memberships at local health clubs, spas, YMCA/YWCA's. Records monitoring participants gains in cardiovascular fitness, flexibility, and muscular strength are kept.

Rigorous Fitness Programs. Under direction of physician(s) and exercise physiologist(s). It usually begins with a thorough medical/physical exam that includes complete medical history, lab tests, and graded exercise testing. Once these tests have been evaluated by the staff, an individualized exercise prescription is written, with an emphasis placed on improvement of the cardiovascular system. In addition to maintaining a qualified staff, the company will invest in elaborate exercise testing equipment and exercise facilities. Again, the facilities may be contracted from local YMCA/YWCA's, spas, or health clubs.

Complete Health Programs. These programs are "total wellness" programs. They include all of the options of the rigorous fitness program plus a wide range of other activities designed to promote the total health of employees. Among these are those focusing on stress management, proper nutrition and dietary counseling, smoking and alcohol abatement, coronary risk and obesity seminars, and CPR training.

QUESTION 1 Does your company offer one or more of these programs for its employees? Yes___ No ___ (Indicate by "X")

If yes, indicate how many employees are involved in each program for each occupational group on the following grid. If no, please stop and return the questionnaire in the envelope provided.

	Executive & Managerial	Professional -Non-managerial	Operatives
Simple Recreation			
Basic Exercise			
Rigorous Exercise			
Complete Health			

QUESTION 2 During which fiscal year did you begin your employee fitness program? _____

"Health Care Expenditures" is defined as the sum of the premiums your organization pays for medical and disability insurance for your employees. Do not include premiums paid for dental and optical coverage unless they are "wrapped" in together with all other premiums. If dental and optical coverage are part of your total premium bill, please check here _____.

QUESTION 3 Indicate (X) which of the following are covered by your insurance plan. If others are considered, please list them in the space provided.

x-rays ___ Hospitalization ___ Diagnostic and lab tests ___ Doctor bills ___ prescriptions ___

short term disability ___ long term disability ___ Other_____

_____

_____

_____

QUESTION 4 What were your corporate health care expenditures per employee for the one fiscal year immediately prior to your employee fitness program implementation? _____

QUESTION 5 What were your corporate health care expenditures per employee for your last complete fiscal year? _____

If you would like to receive feedback concerning the findings of this study, please complete the following:

NAME_____ ADDRESS _____

THANK YOU FOR YOUR TIME AND COOPERATION

Kevin Bill
Field House 201
University of Montana
Missoula, Montana 59812
(406)-243-4211 or (406)-721-0340

APPENDIX C

YEARLY INFLATIONARY RISE

FOR HEALTH CARE EXPENDITURES

'83-'84	6.3%
'82-'83	7.1%
'81-'82	11.1%
'80-'81	11.7%
'79-'80	10.9%
'78-'79	9.4%
'77-'78	8.4%
'76-'77	9.7%
'75-'76	8.9%
'74-'75	11.0%
'73-'74	11.2%
'72-'73	5.0%
'71-'72	3.3%
'70-'71	5.5%
'69-'70	9.1%
'68-'69	8.7%
'67-'68	6.5%

Source: Consumer Price Index, a publication of the Bureau of Labor Statistics, United States Department of Labor.

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